Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Spectrum Policy Task Force	)	ET Docket No. 02-135
Seeks Public Comment on Issues	)	
Related to the Commission's	)	
Spectrum Policies	)	

REPLY COMMENTS OF PROXIM, INC.

Proxim, Inc. ("Proxim") respectfully submits these Reply Comments in the above-referenced proceeding to add its voice to the many commenters who have urged the Commission both to find additional spectrum to be used on an unlicensed basis and to expand the use of the unlicensed spectrum model as a spectrum management tool.

Having argued in its initial comments that a market-based approach is best as an overall dynamic for spectrum allocations and management, in these reply comments, Proxim responds particularly to the parties who have focused on unlicensed spectrum approaches in their initial comments. Both approaches have much to offer and should characterize the Commission's spectrum policy. Indeed, a spectrum commons model significantly can advance the value of wireless communications in the future.

An overwhelming number of the parties in this proceeding support expanding the use of unlicensed spectrum and Proxim concurs. In its comments, CEA urges the Task Force to "consider, within the framework of market-oriented allocation and assignment policies, the significant public benefits derived from

unlicensed spectrum."[1] Cisco asks the Commission to make "spectrum available specifically for 'unlicensed' data networks, [and to modify] its rules to minimize the potential for interference to (and thus optimize the frequency available to) such networks."[2] The Information Technology Industry Council offers that among the ways to make more spectrum subject to market forces in order to encourage efficient use and best meet the needs of users are "spectrum auctions for new licensed services and increased allocation of spectrum for unlicensed uses which provide low barriers to competitive market entry for new technologies and services."[3] This is only a small sample of the comments that highlight the importance of unlicensed spectrum as a spectrum management tool worthy of increased use by the Commission.[4]

Spectrum assigned for use by unlicensed devices has been fertile ground for the creation of many new technologies and, indeed, industries. The early days of Part 15 devices in the 900 MHz band have given way to a virtual explosion in the use of unlicensed technologies for both wireless local area networks (WLANs) and wireless point-to-point and point-to-multipoint systems in the 2.4 GHz and 5 GHz bands. These technologies represent more than simply new ways to send data. Rather, they are one of the most exciting areas of growth in the telecommunications landscape, and they are proving to be a key element in the Commission's strategy to bring the promise of broadband connectivity to all Americans. Unlicensed technologies are enabling a whole new breed of wireless ISPs to become facilities-based competitors to incumbent telephony and cable communications operators. And, by virtue of the unlicensed technology they use, wireless ISPs are able to

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[1] Comments of the Consumer Electronics Association, ET Docket No. 02-135 (July 8, 2002) at 2.
[2] Comments of Cisco Systems, Inc., ET Docket No. 02-135 (July 8, 2002) at i.
[3] Comments of the Information Technology Industry Council, ET Docket No. 02-135 (July 8, 2002) at 4.

address segments of the US population that were, until now, underserved, or not served, by the wired operators. Among other uses, wireless LANs also are being used increasingly to create community-based networks, bringing a diversity of voices and a connecting fabric to many American communities, both virtual and physical.

Proxim suggests that the dynamism evident in unlicensed spectrum bands is consistent with what should be expected in an open environment in which people are free to experiment and try new ideas. In other words, the success of the unlicensed spectrum bands is another example of the value of the commons in public life. The FCC should get credit for having been farsighted enough to recognize the ability of a spectrum commons to generate enormous value, even though that value may not have been captured by classic economic theory. For this reason, we urge the Commission to continue to recognize the enormous value that these spectrum commons have created and to balance a market-based approach with an unlicensed spectrum commons approach in the an overall spectrum management policy that results from the work of the Task Force. As David Bollier states: "[T]he issue is not market versus commons. The issue is how to set equitable and appropriate boundaries between the two realms – semi-permeable membranes – so that the market and the commons can each retain integrity while invigorating the other."[5]

While the use of an unlicensed spectrum commons is a useful spectrum management tool at the moment, Proxim believes that it can become an even more important tool in the future if the Task Force recognizes this opportunity to realign the Commission's policies with the capabilities of current and anticipated, technologies. The primary spectrum management tools used now, both licensing and privatization, were formulated based not only on sound economic rationale, but

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[4] *See also* Comments of the Wireless Ethernet Compatibility Alliance, Comments of Cingular Wireless LLC, Comments of Microsoft Corporation, and Comments of Charles L. Jackson, in ET Docket No. 02-135 (July 8, 2002), among others.

[5] David Bollier, Silent Theft: The Private Plunder of our Common Wealth 4 (Routledge 2002).

also on the underlying technologies being regulated by the FCC and used by its constituents when those policies were formed. That technology has changed, and continues to change, however, and these changes open the door for significant changes to the FCC's spectrum management policy. As stated by Yochai Benkler:

> Privatization, which was the most important alternative to licensing in the 65 years following passage of the Radio Act of 1927, is no longer obviously so. Contemporary wireless communications technologies, developed primarily for mobile communications, show that sharing of broad swaths of frequencies by many users may be a better model for wireless communications than control by one party of a narrow band of frequencies. This new reality removes the technological imperatives and assumptions underlying both licensing and privatization. The licensing/privatization dichotomy no longer marks the most important institutional choice we must make. It is merely a sub-debate within a broader conceptual choice.[6]

Benkler continues:

> On the other hand, it is now technically possible to rely on standards and protocols to enable multilateral coordination of transmissions among equipment owners, without identifying any person whose choices trump those of all other potential users. The central question then, is no longer how to allocate spectrum channels—how to decide who makes unilateral decisions about who may communicate using a frequency band and for what types of communications—but whether to coordinate by defining channel allocations. While the answer may be that we should permit a commons to develop alongside proprietary allocations, we will fail to permit that development if we continue to misperceive the choice at hand as one between licensing and exhaustive privatization.[7]

There are unquestionably complicated issues that need to be resolved in order to expand the use of unlicensed spectrum as a spectrum management tool. There

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[6] Yochai Benkler, Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment, 11 Harv. J.L. & Tech. 287, at 3 (1998).
[7] *Id*. at 4.

will always be services that believe that they cannot coexist with unlicensed devices.[8] Difficulties in the transition from the current spectrum regulatory environment to a new environment that recognizes the advances in wireless communications that have occurred over the past 75 years should not, however, deter the Task Force from fulfilling its charter. As Commissioner Powell remarked when forming this Task Force: "The government has an almost impossible task trying to keep pace with the ever increasing demand for spectrum and continuing advances in wireless technology and applications. In this fast-moving world, the Commission cannot rely on outmoded procedures and policies. We must establish new ways to support innovation and the efficient, flexible use of spectrum."[9]

Proxim looks forward to working actively with the Commission and the Task Force to find solutions to temporary obstacles, and to realize a future in which the idea of an unlicensed spectrum commons becomes a core part of the FCC's spectrum management philosophy.

Respectfully submitted,

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July 23, 2002

[8] *See, e.g.*, Comments of AARL, The National Association for Amateur Radio, ET Docket No. 02-135 (July 8, 2002).
[9] FCC Chairman Michael K. Powell Announces Formation of Spectrum Policy Task Force, News Release (June 6, 2002).